

WHAT IS CLAIMED IS:

1. A central control system of air conditioners,  
comprising:

5 a multi-type air conditioning system including a plurality of indoor units for air conditioning installed in rooms of a building and an outdoor unit for circulation of refrigerant, said outdoor unit being shared by the plurality of indoor units;

10 a power meter, connected to the outdoor unit, for measuring power consumption of the multi-type air conditioning system when the multi-type air conditioning system operates; and

15 a central control unit for calculating respective power consumptions of the indoor units based on both the power consumption measured by the power meter and operation information of the multi-type air conditioning system, and for displaying the calculated respective power consumptions of the indoor units.

20 2. The system according to claim 1, wherein the indoor and outdoor units are connected via an RS-485 protocol based communication line.

25 3. The system according to claim 1, wherein the power

meter is connected with the outdoor unit via an RS-485 protocol based communication line.

4. The system according to claim 1, further comprising a bridge for mutual protocol conversion of signals transmitted and received between the central control unit based on an Ethernet protocol and the outdoor unit and the power meter based on an RS-485 protocol.

5. The system according to claim 1, wherein the central control unit includes:

an air conditioner communicator for transmitting and receiving signals to and from the multi-type air conditioning system and the power meter via a communication line;

a database for storing equipment information of the indoor and outdoor units of the multi-type air conditioning system;

an air conditioner controller for controlling operations of the multi-type air conditioning system and for allowing respective power consumptions of the indoor units calculated based on current operation information of the multi-type air conditioning system and the equipment information stored in the database to be displayed;

an electricity charge calculator for calculating respective electricity charges of the indoor units based on the

respective power consumptions of the indoor units calculated by the air conditioner controller; and

a display unit for displaying the respective electricity charges of the indoor units calculated by the electricity charge calculator or displaying the respective electricity charges of the indoor units calculated by the air conditioner controller.

6. The system according to claim 5, wherein the central controller further includes a control program operator for executing a control program, said control program interfacing with a user for controlling operations of the multi-type air conditioning system and for managing power thereof.

7. The system according to claim 6, wherein the control program operator includes a power division module whereby current power consumption, monthly power consumption and accumulated power consumption of the multi-type air conditioning system, and electricity charges calculated respectively for the indoor units thereof are displayed.

8. The system according to claim 7, wherein the control program operator further includes:

a control module for controlling operations of the multi-type air conditioning system and monitoring states thereof;

a schedule management module for managing an operating schedule of the multi-type air conditioning system; and

a peak power management module for managing peak power consumption of the multi-type air conditioning system for allowing the peak power consumption when the multi-type air conditioning system operates to be limited below a predetermined level.

9. The system according to claim 5, wherein the central control unit further includes an input unit that receives a control command for controlling operations of the multi-type air conditioning system and transfers the received control command to the air conditioner controller.

10. The system according to claim 9, wherein the input unit includes a touch screen allowing touch input, said display unit being integrated into said touch screen.

11. The system according to claim 5, wherein the central control unit includes an Internet modem for connection with an external Internet.

12. A method for operating a central control system of air conditioners, said central control system including a central control unit capable of performing central control of a

multi-type air conditioning system including a plurality of indoor units and an outdoor unit connected thereto via a network, said method comprising the steps of:

a), by the central control unit, receiving information of power consumption of the multi-type air conditioning system from a power meter, said power consumption being measured by the power meter;

b) receiving operation information of the multi-type air conditioning system via the outdoor unit;

c) calculating respective power consumptions of the indoor units based on the operation information of the multi-type air conditioning system and equipment information previously stored in a database; and

d) displaying the calculated respective power consumptions of the indoor units.

13. The method according to claim 12, wherein said step d) includes the steps of:

d-1) calculating respective electricity charges of the indoor units based on the calculated respective power consumptions of the indoor units; and

d-2) displaying the respective electricity charges of the indoor units calculated at said step d-1).